

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose: The Immobilized Tank Waste Storage & Disposal program will provide safe storage and final near-surface disposal on the Hanford Site for immobilized low activity tank waste (ILAW), and interim storage for immobilized high level waste (IHLW).

The ILAW project will be complete when the immobilized low activity tank waste is disposed of on the Hanford site, long term surveillance and monitoring of the ILAW disposal site is ongoing, and interim storage facilities have been decontaminated and decommissioned. The ILAW Storage and Disposal facilities will accept the immobilized low activity tank waste from TWRS privatization vendor. The ILAW waste packages will be placed in near surface storage and disposal facilities. The near surface disposal systems along with the waste package are intended to meet DOE regulatory requirements for near-surface disposal of low-level waste.

The IHLW Interim Storage Facility will receive IHLW, and transport these products to a Canister Storage Building (CSB), where the product will be stored until shipped to a geologic repository (IHLW). Storage of the Phase I product in the CSB will consolidate the high level waste in one area and provide a safe environmentally sound storage of the IHLW product. HLW Interim Storage will provide additional storage capacity during Phase II privatization. In addition HLW Interim Storage will provide loadout capability for shipment of IHLW canisters to a geologic repository.

IHLW and ILAW waste receipts are currently planned to commence in 2007 and 2008, respectively.

Scope: Specific project scope from the Hanford Site technical baseline is provided below in terms of the systems that the project has responsibility for.

Canister Storage Building

- **Receive & Store IHLW, Part 1:** Receive sealed canisters of immobilized high-level waste (IHLW) from the LAW/HLW Plant, Phase I. Prepare and place the canisters in their designated storage locations, monitor the storage locations for storage containment integrity for eventual retrieval and shipment to geologic repository for disposal.
- **Disposition IHLW, Part 1:** Prepare and load out stored IHLW for transport by others to the national repository for final disposition. Under current assumptions IHLW shipment will begin sometime after 2010 and be completed no later than 2041.

IHLW Storage Modules, Part 2

- **Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas:** Following the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D dispositioned for reuse.

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 1 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Project Description Narratives

· Transition IHLW Storage Modules, Part 2: At the completion of the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the facility. Activities include storage vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.

· D&D IHLW Storage Modules, Part 2: At the completion of the mission of the IHLW Storage Modules, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the IHLW Storage Modules, Phase II by demolishing the facility or transition to other use.

· Receive & Store IHLW, Part 2: Receive and transport containers of IHLW from the HLW Treatment Facility, Phase II. Prepare and place the containers in their designated storage locations and monitor the storage locations for storage containment integrity.

· Disposition IHLW, Part 2: This function includes systems and activities necessary to prepare and load out stored IHLW to the geological repository for final disposition. Under current assumptions shipment will begin sometime after 2010 and be completed no later than 2041 .

Immobilized LAW Disposal Facility

· Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas: Maintain the Immobilized LAW Disposal facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facility is ready for closure.

· Transition Immobilized LAW Disposal Facility: Initiate the transition phase to closure of the Immobilized LAW Disposal Facility

· Close Immobilized LAW Disposal Facility: At the completion of monitoring of the Immobilized LAW Disposal Facility, the facility will be placed into a state to be the final disposal site for the ILAW. This could include decontamination of equipment, filling and sealing the storage vaults, and emplacement of a barrier.

· Store ILAW: Package, transport, receive, unload, emplace and store sealed containers of immobilized LAW from the LAW Plant Phase I and the LAW/HLW Plant, Phase I. Monitor the receipt, movement, placement and containment integrity of the immobilized LAW during storage.

· Dispose Immobilized LAW On-Site: Provide on-site disposal of Immobilized LAW. Transport, receive, unload, emplace and cover sealed containers of immobilized LAW from the LAW Treatment Facility, Phase 2. It also includes monitor, control, containment and handling for disposal of Immobilized LAW. This function includes transporting the Immobilized LAW from the Interim Storage site (if necessary) to the disposal site.

Technical Approach: The end point targets in the Hanford Strategic Plan addressed by this project include:

· Low level and low level mixed waste from onsite and offsite sources will continue to be disposed of in the 200 Area.

Dataset Name: **FY 1999 Planning Data**

Page 2 of 18

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Project Description Narratives

- The high level immobilized fraction will be interim stored until it can be shipped offsite for disposal (planned for the Yucca Mountain geologic repository).
- Transition high cost surplus facilities in the Central Plateau Area to a low cost, stable, deactivated condition.
- The immobilized low activity fraction will be disposed onsite in a 200 Area disposal system.
- Remove Central Plateau (200 Area) non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.

The technical approach and technology initiatives for the Project to accomplish the Hanford Strategic Plan end point targets are identified below.

- Technical Approach - Immobilized Tank Waste Storage & Disposal: The ILAW project shall design, construct, operate, monitor and close storage and disposal facilities for immobilized low activity tank waste. The project shall use systems engineering principles to identify functions, requirements, and alternatives for this mission.

The ILAW Project current baseline is to utilize the existing Grout vaults for disposal. Additional Below Grade Disposal Facilities will be constructed to accommodate the remaining ILAW.

In order to support the LAW project certain technology support is necessary to ensure, via a comprehensive performance assessment, that the disposal action can be accomplished in a safe and compliant manner. The technologies are identified, but not limited to, in the following list:

- Standard method for determining waste form release rate
- Glass Monolith Surface Area
- Long term testing of Surface Barrier
- Field measurements of Vadose zone Hydraulic Properties
- Distribution of Recharge Rates
- Multi-Phase Moisture Flow in Arid condition
- Testing of Sand-Gravel Capillary Barrier
- Moisture Dependence of kd
- Getter Materials
- In-Situ Testing of Glass Release

These science and technology needs have been submitted to the Tank Focus Area (EM-50) for consideration.

The high level immobilized fraction of the tank waste will be interim stored until it can be shipped offsite for disposal. The IHLW project will use systems engineering to evaluate functions, requirements, and alternatives. The canisters of IHLW will be stored in vertical tubes in the Canister Storage Building. The storage will be dry with natural convection cooling to maintain repository temperature requirements. The production and storage records will be managed in accordance with geologic repository requirements. The canisters are contaminant free sealed sources when received and minimal contamination is anticipated for D&D. Ability to recover in case of an upset condition will involve capability to overpack canisters.

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 3 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Project Description Narratives

Project Status in FY 2006:

Construction of the Canister Storage Building will be completed. The Immobilized Low Activity Waste Interim Storage Facility construction is under construction. Design of the Immobilized Low Activity Waste Disposal Facility is ongoing.

Post-2006 Project Scope:

Both vaults of the Canister Storage Building will be full of Immobilized High Level Waste. Additional Immobilized HLW Storage Modules will be constructed and storing IHLW canisters pending shipment to the geologic repository. All Immobilized Low Level Waste will be disposed of in the Immobilized Low Activity Waste Disposal Facility

Project End State

The ILAW project is complete when all containers have been placed in the ILAW Disposal Facility. The disposal facility will be closed with surface barriers and monitoring will have been performed.

The IHLW project is complete when the storage facilities are empty and all canisters have been shipped to the geologic repository.

Specific work activities to close the facilities under this Project to be performed by others at the end of this Project's mission are identified below.

Canister Storage Building
Work associated with facility performed by Spent Nuclear Fuel Project:

- Receive Defense Production Reactor Spent Nuclear Fuel

- Design/Construct Canister Storage Building

Work associated with facility performed by Canister Storage Building Operations:

- Decontaminate and Decommission (D&D) Canister Storage Building

- Transition Canister Storage Building

- Disposition Defense Production Reactor SNF

- Maintain Safe & Compliant Canister Storage Building

- Store Defense Production Reactor SNF

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 4 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Project Description Narratives

Cost Baseline Comments:

Estimates supporting the Tank Waste Remediation Systems (TWRS) fiscal year (FY) 2001 Project Baseline Summaries (PBS) estimate were developed using Activity-Based Cost (ABC) estimating methodology consistent with the "Hanford Cost Estimating and Scheduling Guide," DOE/RL-97-90, Revision 0.

The TWRS (FY) 2001 PBS is a product of the development of the technical scope, schedule and cost baselines. The scope, schedule and cost baselines are interrelated and have been integrated. The Hanford Site Technical Baseline requirements have been incorporated in the TWRS Technical Baseline through development of TWRS technical specifications. Level 0 and Level 1 work logics were developed to define the activities and interfaces necessary to meet the technical requirements. For much of the TWRS work, Technical Basis Review (TBR) data packages were then prepared to decompose the Level 1 activities to a detailed, executable task level and document scope and resources necessary to complete the work. Activities and resources from the TBRs were input to Primavera (P3) to prepare the TWRS detailed baseline schedule. Pricing of the estimate was performed in P3 using standard rates and factors developed by the FDH Chief Financial Officer and approved by DOE for forward pricing purposes. The resource-loaded schedules are traceable to the TBR data packages. Costs generated by P3 were developed using the DOE-approved planning rates and were manually escalated using the DOE-approved escalation rates.

Due to significant variations in the current phases of the TWRS projects and available data and scope definition, many estimating techniques have been utilized in development of the cost estimate. They include definitive, parametric, analogy, trend analysis, level of effort and engineering judgement. ABC estimates for the scope of work have been prepared at the lowest level of detail practical. As expected, the level of scope definition and estimate detail is greatest for the near-term activities and less well defined in later years. Through the annual planning process and change control, the execution year and outyear estimate basis will continue to be refined, updated and validated.

The Estimate Basis is contained in numerous technical scope, schedule and cost baseline and supporting documents including TBR data packages.

Safety & Health Hazards:

The projects of this PBS will have construction hazards to workers and radiological and industrial hazards to the workers during operations. Construction hazards to workers arise from movement of heavy equipment, and materials as well as elevated work on scaffolding or ladders. Radiological hazards to workers during operations occur from the movement of containers of highly radioactive glass.

The end state hazard for the immobilized low activity waste (ILAW) projects will consist of the ILAW buried near surface. The radiological performance assessment required by DOE Order 5820.2A will quantify the potential long term hazards associated with projects W-465 and W-520. First submittal of the ILAW Performance Assessment is scheduled for FY 1998. All final hazards are expected to be within acceptable regulatory limits including groundwater protection and protection of inadvertent intrusion.

Nuclear safety analyses will be completed in FY 2002 to address hazards associated with operation of the storage/disposal facilities. A W-464 preliminary safety analysis is scheduled in FY 2001. Additional safety and environmental health analyses and permits will address fire hazards, industrial safety and RCRA waste storage/disposal. These analyses and permits are scheduled for completion in conjunction with design and

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 5 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Project Description Narratives

construction of projects W-465 and W-520 between FY 1999 and FY 2010.

The major end state hazards for the immobilized high level waste (IHLW) projects will be negligible once the waste containers are shipped from the Hanford site to the geologic repository. The major end state hazards will be addressed in the safety analyses for Project W-464 and subsequent projects. These documents are scheduled for completion in FY 2002.

Fire safety, industrial safety, environmental health and permitting are also scheduled for project W-464 to be completed prior to facility startup in FY 2007.

Specific controls for minimization of impacts to the groundwater and intrusion are based upon the durability of the waste form, the engineered disposal system and the cover/barrier system. Requirements for these parameters are identified in the Performance Assessment (DOE/RL-97-69 draft). The performance assessment was delivered to DOE in FY 1998 with scheduled periodic updates. Submittal of the performance assessment is anticipated to lead to authorization to dispose ILAW for TWRS.

ILAW safety analyses will be completed in FY 2002 to address hazards associated with operation of the project W-465. A preliminary safety analysis is scheduled for completion in FY 2003. The W-465 PSE has found the facility to be Hazard Category 3, with no safety class/safety significant systems, structures or components. The glass waste form and the package combine to mitigate potential releases. Project W-520 will also undergo a similar safety evaluation. The W-520 final safety analysis is scheduled for completion in FY 2009.

IHLW controls will be addressed in the safety analyses for Project W-464 and subsequent IHLW interim storage projects. The W-464 safety analysis is scheduled for completion in FY 2005. A preliminary safety analysis is scheduled for completion in FY FY 2002. Specific controls for the minimization of impacts are expected to be shielding, packaging and the solidified waste form. This safety analysis will be integrated with the Spent Nuclear Fuel-Canister Storage Building safety analysis currently being prepared.

Safety & Health Work Performance:

See PBS TW10

PBS Comments:

The Storage & Disposal projects are an integral part of the TWRS Privatization effort. The ILAW Storage and Disposal project will ultimately dispose of the vast majority of solidified Hanford tank waste product. This constitutes one of the largest disposal actions within DOE. The IHLW Interim Storage will consolidate HLW storage in the 200E Plateau. The use of natural convection cooling provides for minimal storage and maintenance costs while using available technology. Transportation systems will utilize existing technology and existing designs whenever possible. Use of the existing storage facilities without major structural modifications is a significant cost savings.

The capsules are currently classified as by-product, rather than waste. Their safe storage in the WESF is currently the responsibility of the Transition Project. The Tri-Party Agreement requires the DOE to apply for a Part A permit by December 1997 for any of the capsules for which there are no signed contracts for future beneficial use by that time. Even in the event that there are identified beneficial uses for some of the capsules, it is expected that a large number of the capsules will still require processing for final disposal. Furthermore, unless the DOE is able to contractually transfer that responsibility to the commercial irradiators, it will still be obligated to accept the capsules back at the end of their useful life for final

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 6 of 18

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: River Protection

Site Summary Level: Office of River Protection

Project RL-TW09 / Immobilized Tank Waste Storage & Disposal Project

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0391

Project Description Narratives

disposition.

Baseline Validation Narrative:

Conceptual designs were performed in FY 1998 for projects (W-464 and W-465). The CDR's were used for validation of the projects in April 1998. A conceptual design for future disposal facilities will be performed to support Project W-520. The project will identify risks, uncertainties and work to further reduce the uncertainties for the follow on validations. The baseline documents, F&R, DRD, SOW have been performed to define the projects.. The ILAW Performance Assessment underwent an independent Technical and External Review in FY97 and was submitted to DOE-HQ for peer review panel evaluation in FY 98.

General PBS Information

Project Validated?

Date Validated:

Has Headquarters reviewed and approved project?

Yes

Date Project was Added: 12/1/1997

Baseline Submission Date:

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
		Y	Y				Y	Y

Project Identification Information

DOE Project Manager: W.J. Taylor

DOE Project Manager Phone Number: 509-372-3864

DOE Project Manager Fax Number: 509-376-8532

DOE Project Manager e-mail address: william_j_taylor@rl.gov

Is this a High Visibility Project (Y/N): Y

Planning Section

Baseline Costs (in thousands of dollars)

1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
--------------------	--------------------	--------------------	------	----------------	------	----------------	------	------	------	------	------	------	------	------

Dataset Name: FY 1999 Planning Data

Page 7 of 18

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **River Protection**

Print Date: **3/9/2000**

Site Summary Level: **Office of River Protection**

HQ ID: **0391**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

PBS Baseline (current year dollars)	230,648	3,577,342	3,807,990	4,968	4,687	11,302	10,257	4,750	7,652	13,772	19,678	47,696	58,420	24,715	37,695	
PBS Baseline (constant 1999 dollars)	210,488	2,347,657	2,558,145	4,968	4,687	11,302	10,257	4,750	7,495	13,198	18,452	43,763	52,448	21,711	32,401	
PBS EM Baseline (current year dollars)	230,648	3,577,342	3,807,990	4,968	4,687	11,302	10,257	4,750	7,652	13,772	19,678	47,696	58,420	24,715	37,695	
PBS EM Baseline (constant 1999 dollars)	210,488	2,347,657	2,558,145	4,968	4,687	11,302	10,257	4,750	7,495	13,198	18,452	43,763	52,448	21,711	32,401	
	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	49,615	93,555	165,054	216,270	941,944	1,128,115	366,095	189,194	36,358	75,025	154,097	162,020				
PBS Baseline (constant 1999 dollars)	41,728	76,990	132,905	170,397	695,574	747,165	217,472	100,801	17,374	32,155	59,236	55,860				
PBS EM Baseline (current year dollars)	49,615	93,555	165,054	216,270	941,944	1,128,115	366,095	189,194	36,358	75,025	154,097	162,020				
PBS EM Baseline (constant 1999 dollars)	41,728	76,990	132,905	170,397	695,574	747,165	217,472	100,801	17,374	32,155	59,236	55,860				

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.10%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%	2.20%				

Dataset Name: **FY 1999 Planning Data**

Page 8 of 18

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: River Protection

Site Summary Level: Office of River Protection

Project RL-TW09 / Immobilized Tank Waste Storage & Disposal Project

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0391

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/30/2046

Current Projected End Date of Project: 9/30/2046

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars): 7,164,811 Actual 1997 Cost: 4,687 Actual 1998 Cost: 10,257

Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars): 7,149,867 Inflation Adjustment (2.7% to convert 1998 to 1999 dollars): 193,046

Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): 7,342,913

Project Cost Changes

Cost Adjustments Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Cost Reductions Due to Efficiencies (-):

Cost Associated with New Scope (+):

Cost Growth Associated with Scope Previously Reported (+):

Cost Reductions Due to Science & Technology Efficiencies (-):

Subtotal: 7,342,913

Additional Amount to Reconcile (+): -4,801,038

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): 2,541,875

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
C/ FACILITIES ACQUISITION/MOD NECESSARY FOR IHLW & ILAW	T09-42-100	12/31/2049	9/30/2048	12/31/2049			Y				

Dataset Name: FY 1999 Planning Data

Page 9 of 18

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
CANISTER STORAGE FACILITY PART B DANGEROUS WASTE PERMIT APPLICAT'N	T09-01-100	12/31/2000	6/30/2003	12/31/2000			Y				
COMPLETE CANISTER STORAGE FACILITY CONSTRUCTION	T09-03-003	12/31/2002	3/31/2006	12/31/2002			Y				
INITIATE HOT OPERATIONS OF ILAW DISPOSAL FACILITY	T09-06-100	12/31/2005	5/17/2011	12/31/2005			Y				
INITIATE HOT OPERATIONS OF ILAW INTERIM STORAGE FACILITY	T09-02-002	12/31/2002	1/2/2008	12/31/2002			Y				
INITIATE ILAW DISPOSAL FACILITY CONSTRUCTION	T09-05-005	6/30/2003	8/27/2007	6/30/2003			Y				
INITIATE ILAW INTERIM STORAGE FACILITY CONSTRUCTION	T09-00-003	6/30/2001	10/1/2003	6/30/2001	6/30/2001		Y				
REV CANISTER STORAGE FAC PART A DANGEROUS WASTE PERMIT APPLICAT'N	T09-99-100	6/30/1999	6/30/1999	6/30/1999			Y				
SUBMIT INTERIM ILAW FACILITY PART B PERMIT APPLICATION TO ECOLOGY	T09-01-021	12/31/2000	4/30/2004	12/31/2000			Y				
SUBMIT LAW DISPOSAL FACILITY PART B PERMIT APPLICATION TO ECOLOGY	T09-01-020	12/31/2003	8/25/2008	12/31/2003	12/31/2003		Y				
Begin Immobilized Tank Waste Storage and Disposal Project	PBS-97-008		2/28/1997								
PBS Mission Completion	PBS-MC-008		9/30/2046								
PBS Project End	PBS-PE-008		9/30/2046								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
C/ FACILITIES ACQUISITION/MOD	T09-42-100										Complete acquisition of new facilities, modification of existing

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
NECESSARY FOR IHLW & ILAW											facilities, and/or modification of planned facilities as necessary for storage of Hanford Site IHLW and ILAW and disposal of ILAW.
CANISTER STORAGE FACILITY PART B DANGEROUS WASTE PERMIT APPLICATION	T09-01-100	Y									Submit Canister Storage Building (CSB) Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.
COMPLETE CANISTER STORAGE FACILITY CONSTRUCTION	T09-03-003	Y									Declaration of readiness by DOE-RL for the interim storage of HLW in Vaults 2 and 3 of the Canister Storage Building (CSB). This will be performed immediately after construction/outfit.
											Description of this milestone requires the completion of all cons
INITIATE HOT OPERATIONS OF ILAW DISPOSAL FACILITY	T09-06-100	Y									Complete all construction, startup, permitting, and preoperational activities necessary to begin radioactive operations of the first module of the ILAW Disposal.
INITIATE HOT OPERATIONS OF ILAW INTERIM STORAGE FACILITY	T09-02-002	Y									Complete all construction, startup, permitting, and preoperational activities necessary to begin radioactive operations of the first portion of the ILAW Interim Storage Facility.
INITIATE ILAW DISPOSAL FACILITY CONSTRUCTION	T09-05-005	Y									Activities leading to initiation of construction include completion of the following: Definitive Design, Preliminary Safety Analysis Report, applicable environmental

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 11 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
INITIATE ILAW INTERIM STORAGE FACILITY CONSTRUCTION	T09-00-003	Y									documentation, and required project management documentation per DOE Order 4700.1. Activities leading to initiation of construction include completion of the following: Definitive Design, Preliminary Safety Analysis Report, applicable environmental documentation, and required project management documentation per DOE Order 4700.1.
REV CANISTER STORAGE FAC PART A DANGEROUS WASTE PERMIT APPLICAT'N	T09-99-100	Y									Prepare strategy for permitting Vaults 2 and 3 of the Canister Storage Building (CSB). Negotiate strategy with Ecology and revise waste permit application originally submitted under HWVP.
SUBMIT INTERIM ILAW FACILITY PART B PERMIT APPLICATION TO ECOLOGY	T09-01-021	Y									Submit Interim ILAW Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.
SUBMIT LAW DISPOSAL FACILITY PART B PERMIT APPLICATION TO ECOLOGY	T09-01-020	Y									Submit ILAW Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.
Begin Immobilized Tank Waste Storage and Disposal Project	PBS-97-008			Y							Administrative input to document the start of this PBS.
PBS Mission Completion	PBS-MC-008					Y					Administrative input to document the mission completion of this PBS.
PBS Project End	PBS-PE-008				Y						Administrative input to document the project end of this PBS.

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 12 of 18

Project Baseline Summary Report

Data Source: EM CDB

Report Number: GEN-01b

Operations/Field Office: River Protection

Print Date: 3/9/2000

Site Summary Level: Office of River Protection

HQ ID: 0391

Project RL-TW09 / Immobilized Tank Waste Storage & Disposal Project

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Fac.														
Decom.- Assess.	NF	0.00	0.00	0.00										
Fac.														
Decom- Cleanup	NF	0.00	2.00	2.00										
Fac.														
Deact. During Per.	NF	0.00	2.00	2.00										
HLW														
Treatment	M3	0.00	17,164.00	17,164.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00
HLW														
Storage	M3							0.00	0.00	0.00	0.00	0.00	0.00	0.00
LLW														
On-Site Disp.	M3	0.00	251,593.00	251,593.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tech.														
Deployed	Ntd	3.00	0.00	3.00						1.00	2.00			
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	
Fac.														
Decom.- Assess.	NF													
Fac.														
Decom- Cleanup	NF											1.00		
Fac.														
Deact. During Per.	NF											1.00		

Dataset Name: FY 1999 Planning Data

Page 13 of 18

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: River Protection

Site Summary Level: Office of River Protection

Project RL-TW09 / Immobilized Tank Waste Storage & Disposal Project

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0391

Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
HLW													
Treatment	M3	0.00	0.00	0.00	60.00	60.00	60.00	60.00	4,168.00	5,020.00	4,835.00	2,901.00	0.00
HLW													
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LLW													
On-Site Disp. Tech.	M3	0.00	0.00	0.00	0.00	2,163.00	2,163.00	2,163.00	64,415.00	73,489.00	67,000.00	40,200.00	0.00
Deployed	Ntd												
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
Fac.													
Decom.- Assess.	NF								3.00	3.00			
Fac.													
Decom- Cleanup	NF			1.00					1.00	3.00			
Fac.													
Deact. During Per.	NF		1.00						1.00	3.00			
HLW													
Treatment	M3	0.00	0.00	0.00						17,164.00			
HLW													
Storage	M3	0.00	0.00	0.00									
LLW													
On-Site Disp. Tech.	M3	0.00	0.00	0.00						251,593.00			
Deployed	Ntd									3.00			

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: River Protection

Site Summary Level: Office of River Protection

Project RL-TW09 / Immobilized Tank Waste Storage & Disposal Project

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0391

Facility Decommissioning

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	2583		IHLW Storage Modules, Part 2	\					2045			2047						
HASI	8678		Immobilized LAW Disposal Facility	\					2028			2028						
HASI	8679		Immobilized LAW Disposal Facility, Additional Vaults	\														

Facility Deactivation

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
HASI	2583		IHLW Storage Modules, Part 2	\					2045			2047						
HASI	8678		Immobilized LAW Disposal Facility	\					2028			2028						
HASI	8679		Immobilized LAW Disposal Facility, Additional Vaults	\														

Technology Needs

Site Need Code: RL-WT016

Site Need Name: Glass Monolith Surface Area

Focus Area Work Package ID: WT-10-01

Focus Area Work Package: Immobilization Enhancements

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: FY 1999 Planning Data

Page 15 of 18

Date of Dataset: 9/20/1999

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Technology Needs

Related CCP Milestones

Site Need Code: RL-WT017

Site Need Name: Long-Term Testing of Surface Barrier

Focus Area Work Package ID: WT-12-01

Focus Area: TFA

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Related Waste Streams

02119: HLW-30 - LAW Glass

Agree?

Y

Change?

N

Focus Area Work Package: Closure Enhancements

Agree with Technology Link: Y

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Site Need Code: RL-WT018

Site Need Name: Testing of Sand-Gravel Capillary Barrier

Focus Area Work Package ID: WT-12-01

Focus Area: TFA

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Related Waste Streams

02119: HLW-30 - LAW Glass

02120: HLW-23 - Tanks

Agree?

Y

Change?

N

Y

N

Focus Area Work Package: Closure Enhancements

Agree with Technology Link: Y

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 16 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Technology Needs

Related CCP Milestones

Related Waste Streams

Agree?

Change?

02119: HLW-30 - LAW Glass

Y

N

02120: HLW-23 - Tanks

Y

N

Site Need Code: RL-WT029

Site Need Name: Data and Tools for Performance Assessments

Focus Area Work Package ID: WT-12-01

Focus Area Work Package: Closure Enhancements

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

02119: HLW-30 - LAW Glass

Y

N

02120: HLW-23 - Tanks

Y

N

Site Need Code: RL-WT015

Site Need Name: Standard Method for Determining Waste Form Release Rate

Focus Area Work Package ID: WT-07-01

Focus Area Work Package: Acceptance Criteria and Canister Storage

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Low Activity Waste Forms

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 17 of 18

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **River Protection**

Site Summary Level: **Office of River Protection**

Project **RL-TW09 / Immobilized Tank Waste Storage & Disposal Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0391**

Technology Needs

Related CCP Milestones

Related Waste Streams

Agree?

Change?

02119: HLW-30 - LAW Glass

Y

N

Technology Deployments

		Deployment Year		
<u>Deployment Status</u>		<u>Planned</u>	<u>Forecast</u>	<u>Actual Date</u>
Technology Name:	Low Activity Waste Forms			
Potential Deployment		2001		
Technology Name:	Tank Site Closure Technology			
Potential Deployment		2000		
Technology Name:	Product Acceptance Testing - #2094			
Potential Deployment		2001		